



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Pat McCrory
Governor

John E. Skvarla, III
Secretary

September 25, 2014

Mr. Don Plessinger
Red Rock Disposal, LLC
7130 New Landfill Road
Holly Springs, NC 27540

Subject: Financial Assurance Cost Estimate
Red Rock Disposal, LLC
Permit 9228-CDLF-2001, Wake County, Document ID No. 21847

Dear Mr. Plessinger:

The Division of Waste Management, Solid Waste Section has completed the review of the financial assurance cost estimate received September 24, 2014 (attached). This letter approves the financial assurance as shown below.

Closure	\$2,283,040
Post-Closure	\$1,450,500
Corrective Action	0
Potential Assessment and Corrective Action	\$1,000,000
TOTAL	\$4,733,540

Ms. Sarah Rice may be contacted at (919) 707-8287 or by email at sarah.rice@ncdenr.gov concerning mechanisms to demonstrate financial assurance.

If you have any other questions, you may contact me at (919) 707-8257 or by email at pat.backus@ncdenr.gov.

Sincerely,

Patricia M. Backus, P.E., Environmental Engineer
Division of Waste Management, NCDENR

cc: Sarah Rice, Compliance Officer
David Pepper, Waste Industries USA, Inc.
Stacey A. Smith, P.E., Smith Gardner, Inc.
Ed Mussler, P.E., Permitting Branch Supervisor
Shawn McKee, Environmental Senior Specialist

September 24, 2014

Patricia Backus, P.E.
Environmental Engineer II
North Carolina Department of Environment and Natural Resources
Waste Management Division - Solid Waste Section Permitting Branch
1646 Mail Service Center
Raleigh, NC 27699-1646

**RE: Red Rock Disposal, LLC C&D Landfill (Solid Waste Permit No. 92-28)
Closure, Post-Closure, and Assessment/Corrective Action Cost Estimates**

Dear Ms. Backus:

On behalf of Red Rock Disposal, LLC, Smith Gardner, Inc. (S+G) is pleased to submit the cost estimates related to closure, post-closure, and potential assessment & corrective action costs for the Red Rock Disposal C&D Landfill. The following are the estimated closure, post-closure, and assessment/corrective action costs as of the date of this letter:

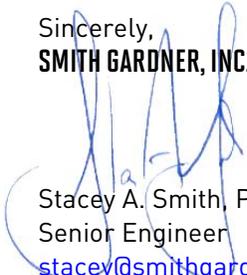
Phase 1 Closure Cost (44 acres):	\$2,283,040
Phase 1 Post-Closure Cost (30-Yr) (44 acres):	\$1,450,500
Potential Assessment and Corrective Action Cost (SL 2014-120):	\$1,000,000
Total:	\$4,733,540

Please find **attached** a detailed breakdown of closure, post-closure, and assessment and corrective action costs.

S+G has performed these types of estimates for a number of our clients and through our extensive work in the solid waste industry we maintain an up to date understanding of construction, maintenance, and monitoring costs related to landfills and recovery facilities.

Please contact me at your earliest convenience if you have any questions or comments on this matter.

Sincerely,
SMITH GARDNER, INC.


Stacey A. Smith, P.E.
Senior Engineer

stacey@smithgardnerinc.com

Attachments: Closure and Post-Closure Cost Estimates

cc: David Pepper, Waste Industries USA, Inc.
Don Plessinger, Red Rock Disposal, LLC
Jim Poole, INSURE
Shawn McKee, NCDENR
File

Red Rock Disposal, LLC C&D Landfill (NC Solid Waste Permit No. 92-28)
Engineer's Closure Construction Cost Estimate

Item No.	Item Description	Unit	Contractor			Comments
			Quantity	Unit Price	Total Price	
Closure Area (Horizontal Plan) ---->			AC	44.2		
1.0	Pre-Construction			Subtotal	\$37,100.00	
1.1	Construction Documents & Bidding	AC	44	\$15k + \$500/AC	\$37,100.00	S+G Estimate
2.0	Construction				\$1,927,120.00	References 1 & 2
2.1	Surveys and Layout	AC	44	\$2,000.00	\$88,400.00	S+G Historical Estimate
2.2	Mobilization	AC	44	\$2,000.00	\$88,400.00	~4% of Construction Cost
2.3	Site Preparation (repairs to intermediate cover layer)	AC	44	\$500.00	\$22,100.00	Assumed estimate for repair of erosion rills.
2.4	18" On-site Low Permeability Soil	CY	106,964	\$8.00	\$855,712.00	S+G Historical Estimate for On-Site Materials.
2.5	18" Vegetative Support Layer	CY	106,964	\$4.50	\$481,338.00	S+G Historical Estimate
2.6	Landfill Gas Venting System	AC	44	\$1,750.00	\$77,350.00	S+G Historical Estimate
2.7	Cap Drainage Structures (berms, piping, etc.)	AC	44	\$4,300.00	\$190,060.00	S+G Historical Estimate
2.8	Erosion & Sediment Control (grading, silt fence, maintenance, etc.)	AC	44	\$800.00	\$35,360.00	S+G Historical Estimate
2.9	Revegetation	AC	44	\$2,000.00	\$88,400.00	S+G Historical Estimate
3.0	Quality Assurance, Certification, & Deed Notation				\$263,570.00	
3.1	Field Monitoring	AC	44	\$3,000.00	\$132,600.00	S+G Estimate
3.2	Laboratory Testing	AC	44	\$2,500.00	\$110,500.00	S+G Estimate
3.3	Engineering Certification	AC	44	\$5k + \$250/AC	\$16,050.00	S+G Estimate
3.4	Surveying and Deed Notation	AC	44	\$100.00	\$4,420.00	S+G Historical Estimate
4.0	Miscellaneous Costs to Close				\$55,250.00	
4.1	Erosion and Stormwater Control (outside landfill footprint)	AC	44	\$1,000.00	\$44,200.00	S+G Historical Estimate
4.2	Engineering and Reporting	AC	44	\$250.00	\$11,050.00	S+G Historical Estimate
5.0	Total Closure Costs					
Construction Estimate ---->					\$2,283,040	(2014\$)
Cost per Acre ---->					\$51,652	
Total Estimate ---->					\$2,283,040	(2014\$) (See Notes 1 & 2)

Notes:

- All costs are presented in current dollars and should be increased at an inflation rate prescribed by the NCDENR Division of Waste Management per <http://portal.ncdenr.org/web/wm/sw/financialassurance> if additional review is not performed annually.
- This ESTIMATE has been prepared for financial assurance purposes only and shall not be considered a replacement for an actual bid from a licensed contractor and is considered acceptable within a +/- 10% of the Total Estimate value.

References:

- Red Rock Disposal, LLC - C&D Landfill - Permit to Construct Application by G.N. Richardson & Associates, Inc. dated June 2001 with revisions through April 2004.
- Red Rock Disposal, LLC - C&D Landfill - Revised Permit to Construct Application by G.N. Richardson & Associates, Inc. dated October 2003.

Denotes values calculated in spreadsheet.

**Red Rock Disposal, LLC C&D Landfill (NC Solid Waste Permit No. 92-28)
Engineer's Post Closure Cost Estimate**

Item	Quantity	Unit	Comments
Groundwater Monitoring			
Monitoring wells	15	wells	Reference 1
Surface water point	2	points	Reference 1
Sampling frequency	2	events	Reference 1
Field sampling, collection, and shipping	\$2,200	per event	S+G estimate
Laboratory Analysis	\$250	per well	S+G estimate
Data review, statistics, and reporting	\$2,000	per event	S+G estimate
Maintenance and repair	\$100	per well	S+G estimate
Subtotal Cost	\$18,400	per year	Compares to current pricing by Golder
Landfill Gas Management			
Control System Vents	23	vents	Pro-rated @ one (1) per two (2) acres
Sub-Surface Perimeter Monitoring Probes	6	probes	Per Ref. 1
Control system monitoring, maintenance and repair	\$100	per vent per year	S+G estimate
Semi-Annual Perimeter Monitoring	\$250	per probe per year	S+G estimate
Subtotal Cost	\$3,750	per year	Averaged over post-closure period
Final Cover Management			
Area of maintenance	45	acres	Extends to area immediately around landfill.
Mowing	\$100	per acre	S+G estimate
Erosion and sediment control maintenance	\$200	per acre	S+G estimate
Topdressing (seed & fertilizer)	\$150	per acre	S+G estimate
Vector and rodent control	\$10	per acre	S+G estimate
Maintenance Mobilization	\$1,000	per year	S+G estimate
Subtotal Cost	\$21,700	per year	
Administration, Inspections, and Reporting			
Administration and record keeping	\$2,000	per year	S+G estimate
Inspection	\$1,000	per year	S+G estimate
Miscellaneous engineering	\$1,500	per year	S+G estimate
Subtotal Cost	\$4,500	per year	
Subtotal Post-Closure Costs			
Estimated Average Annual Costs	\$48,350	per year	
Number of Years for Post-Closure	30	years	
Cost per Acre	\$1,074.44	per year	
Subtotal Post Closure Costs	\$1,450,500		
Potential Assessment and Corrective (Remedial) Action			
Minimum amount required by NCDENR Division of Waste Management	\$1,000,000	lump sum	Regulatory requirement (Session Law 2014-120)
Total Post Closure and Remedial Costs	\$2,450,500	(2014\$) (See Notes 1 & 2)	
Total Closure, Post Closure, and Remedial Costs	\$4,733,540	(2014\$) (See Notes 1 & 2)	

Notes:

- All costs are presented in current dollars and should be increased at an inflation rate prescribed by the NCDENR Division of Waste Management per <http://portal.ncdenr.org/web/wm/sw/financialassurance> if additional review is not performed annually.
- This ESTIMATE has been prepared for financial assurance purposes only and shall not be considered a replacement for an actual bid from a licensed contractor and is considered acceptable within a +/- 10% of the Total Estimate value.

References:

- Red Rock Disposal, LLC - Phase 1 Permit to Construct Application by G.N. Richardson & Associates, Inc. dated October 2003.

Denotes values calculated in spreadsheet.